

### **REMARKS/ARGUMENTS**

With this Amendment, Applicant amends claims 1, 7, 8, 9 and 15.<sup>1</sup> No new matter is added. Therefore, claims 1-20 are all the claims currently pending in the present application. Based on the foregoing amendments and the following remarks, Applicant requests reconsideration of the application and allowance of the claims.

#### **I. Rejection of Claim 9 under 35 U.S.C. § 112, second paragraph**

Claim 9 stands rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Applicant herein amends claim 9 and submits that the amendment overcomes the rejection. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the § 112, second paragraph rejection of claim 9.

#### **II. Objection of Claims 1, 7, 8 and 15**

The Examiner objected to claims 1, 7, 8 and 15 due to informalities. Applicant herein amends claims 1, 7, 8 and 15 and submits that the amendments obviate the objections. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the objection to claims 1, 7, 8 and 15.

#### **III. Rejection of Claims 1, 4, 6, 7, 11, 14-19 under 35 U.S.C. § 102(e)**

Claims 1, 4, 6, 7, 11, 14-19 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Das et al. (U.S. Patent Publn. No. 2003/0148770; hereinafter "Das").

Claim 1 requires a radio communication system having a multiple-antenna transmitter that selectably transmits data at least from a first transmit antenna transducer and at least a second transmit antenna transducer for communication to a receiver, the data encoded at an encoder to include *a systematic part and a non-systematic part, ...*" comprising, *inter alia*, "a determiner at least adapted to receive indications of channel conditions ..." and "a data assignor

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<sup>1</sup> Applicant submits that the amendments made herein to the claims are exclusively for clarification purposes and not for narrowing the claims or for altering the scope. The amendments only show what was believed to have already been claimed herein. Thus, no equivalents are foreclosed by these non-narrowing amendments.

coupled to said determiner to receive indications of determinations made thereat.” Further claim 1 recites that the “assignor for assigning the systematic part of the data encoded by the encoder to at least one of the first and at least second transmit antenna transducers [that] exhibits better channel qualities.”

Applicant respectfully submits that Das does not teach or suggest at least the above recitations of claim 1. In rejecting claim 1, the Examiner suggests that the wireless communications system 100 of FIG. 1 of Das teaches all of the features of claim 1. (See pg. 2 of the Office Action) Applicant respectfully disagrees.

In contrast to claim 1, Das merely relates generally to an improved performance of closed loop transmit diversity (CLTD) system by encoding antenna control information fed back from a mobile station 120 to a base station 110. (See FIG. 1 of Das) Das discloses that a base station 110 may have multiple antennas (e.g., 112<sub>1</sub> & 112<sub>2</sub>) which receive signals from a transmitter 114. The transmitter 114 includes a channel encoder 111 which receives and encodes signals, such as control and data signals, for transmission to the mobile station 120 via one of the antennas 112. (Paragraph [0026])

In view of the foregoing, Das fails to teach or suggest at least a radio communication system having, *inter alia*, “a multiple-antenna transmitter that selectably transmits data, ... the data encoded at an encoder to include *a systematic part and a non-systematic part* ... a data assignor coupled to said determiner to receive indications of determinations made thereat, said assignor for assigning *the systematic part* of the data encoded by the encoder to at least one of the first and at least second transmit antenna transducers that exhibits better channel qualities,” as claimed. In rejecting Claim 1, the Examiner alleges that the antenna weight generator 116 and scheduler 118 correspond to the claimed data assignor. (See pg. 2 of the Office Action where the Examiner alleges Das “discloses a data assignor (fig. 1, 116, 118)”)

Contrary to the Examiner’s allegation, Das, at best, merely discloses that the antenna weight generator 116 “generates a set of antenna weights [i.e.,  $W_1$  and  $W_2$ ] based on extracted ACI bits” that may be “applied at weight multipliers 115 for future transmissions from antennas 112” and that the scheduler 118 “schedules and selects transport format (TF)” “of future transmissions using the extracted channel quality information.” (Paragraphs [0045] & [0046])

As can be seen in FIG. 1 of Das, the antenna weights  $W_1$  and  $W_2$  generated by weight generator 116 are applied to weight multipliers 115<sub>1</sub> and 115<sub>2</sub> in order to adjust the phase and/or amplitude of signals at antenna 112. There is no teaching or suggestion in Das, and the Examiner cites to none, relating to the weight generator 116 and the scheduler 118 (i.e., alleged data assignor) assigning different parts of data received at the channel encoder 111 to different antennas 112<sub>1</sub> and 112<sub>2</sub>. (Quite the contrary, the weight generator 116 and the scheduler 118 (i.e., alleged data assignor) of Das does not assign data received at the channel encoder to antennas 112.) As such, Das does not teach or suggest that the antenna weight generator 116 and scheduler 118 (i.e., alleged data assignor) assigns a systematic part of encoded data to one of the antennas 112 which has a better channel quality, as required by claim 1.

Additionally, the Examiner does not identify any parts of encoded data in Das, which “[includes] a systematic part and a non-systematic part,” as required by Claim 1, but instead merely suggests that “encoded data” of Das corresponds to the claimed systematic part of the data encoded. (See pg. 2 of the Office Action where the Examiner alleges that Das teaches “assigning the encoded data to ... transducers.” (emphasis added)) To the extent that the Examiner is suggesting that the control signals and the data signals (See FIG. 1) of Das correspond to a systematic part and a non-systematic part, respectively (or vice versa) of encoded data, Applicant submits that there is no teaching or suggestion in Das, and the Examiner cites to none, that the antenna weight generator 116 and scheduler 118 (i.e., alleged data assignor) assign either the control data signals or the data signals of the data encoded by channel encoder 111 to one of the antennas 112 which exhibits the best channel quality, as required by Claim 1. The interrelationship of claim elements is simply not met by Das. Applicant further submits that one skilled in the art clearly understands that encoded control signals do not correspond to a systematic part (or vice versa a non-systematic part)<sup>2</sup> of encoded data. To be precise, those skilled in the art understand that a systematic part of encoded data is the informational content part of the encoded data. (See specification pg. 6, lines 3-4; See also specification pg. 9, lines 27-28) At best, control signals merely control mobile stations, such as mobile station 120. As

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<sup>2</sup> Those skilled in the art understand that a non-systematic part of encoded data is formed of parity data (or bits), or other non-systematic data (or bits). (See specification pg. 9, lines 27-28)

such, Das does not teach or suggest that the control and data signals disclosed therein correspond to "data encoded at an encoder to include a systematic part and non-systematic part," as required by claim 1.

Based on at least the foregoing, Applicant submits that Das does not teach or suggest all of the features of claim 1. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 1 and its dependent claims 2-14.

Since claim 15 contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 1, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 15 and its dependent claims 16, 17, 18, 19 and 20 for reasons analogous to those submitted for independent claim 1.

#### **IV. Rejection of Claims 3, 12 and 20 under 35 U.S.C. § 103(a)**

Claims 3, 12 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Das and further in view of Kuchi et al. (U.S. Patent No. 6,185,266; hereinafter "Kuchi"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Das is deficient vis-à-vis independent claim 1 and independent claim 15. Kuchi does not compensate for the deficiencies of Das. Accordingly, claims 3, 12 and 20 are patentable at least by virtue of their respective dependencies from claim 1 and claim 15. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claims 3, 12 and 20.

#### **V. Rejection of Claims 2, 5, 9, 10 and 13 under 35 U.S.C. § 103(a)**

Claims 2, 5, 9, 10 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Das and further in view of Kim et al. (U.S. Patent No. 7,016,658; hereinafter "Kim"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Das is deficient vis-à-vis independent claim 1. Kim does not compensate for the deficiencies of Das. Accordingly, claims 2, 5, 9, 10 and 13 are patentable at least by virtue of their dependencies from claim 1. Applicant therefore respectfully requests the

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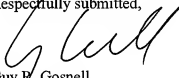
Examiner to reconsider and withdraw the § 103(a) rejection of dependent claims 2, 5, 9, 10 and 13.

## **VI. Conclusion**

In view of the foregoing remarks, Applicant respectfully submits that all of the claims of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. Examiner File is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Guy R. Gosnell  
Registration No. 34,610

**Customer No. 00826**  
**ALSTON & BIRD LLP**  
Bank of America Plaza  
101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Charlotte Office (704) 444-1000  
Fax Charlotte Office (704) 444-1111

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